

Appl. No. 10/687,501
Amdt. dated October 7, 2005
Reply to Office Action of June 7, 2005

In the Claims:

Please amend claim 1, cancel claims 28-39 and add new claims 40-46.

1. (Currently Amended) An ink jet recording medium comprising
an absorbent paper base sheet, and
a three-dimensional porous coating on said base sheet,
said coating comprising ~~a reaction product of~~ polyvinyl alcohol and boric acid
wherein the ~~molecule~~ molecular bonds are principally polyvinyl alcohol-boric acid-polyvinyl
alcohol bonds, and
wherein said coating comprising polyvinyl alcohol and boric acid bonds are
configured to form a sieve or screen facilitating penetration of ink carrier vehicle to said base
sheet while holding ink pigment or colorant out on the sieve or screen.

2. (Original) A recording medium as set forth in Claim 1 wherein said
coating includes an immobilizer.

3. (Original) A recording medium as set forth in Claim 2 wherein said
immobilizer is glyoxal, zirconium or epoxy based.

Appl. No. 10/687,501
Amdt. dated October 7, 2005
Reply to Office Action of June 7, 2005

4. (Original) A recording medium as set forth in Claim 1 wherein said coating includes an ink setting agent.

5. (Original) A recording medium as set forth in Claim 4 wherein said ink setting agent comprises a cationic or conductive polymer.

6. (Original) A recording medium as set forth in Claim 1 wherein said coating includes a pigment.

7. (Original) A recording medium as set forth in Claim 1 wherein said coating is comprised of from about 75 to about 96 parts by weight polyvinyl alcohol and from about 1 to about 6 parts by weight boric acid.

8. (Original) A recording medium as set forth in Claim 7 wherein said coating includes from about 0.25 to about 4 parts by weight insolubilizer.

Appl. No. 10/687,501
Amdt. dated October 7, 2005
Reply to Office Action of June 7, 2005

9 (Original) A recording medium as set forth in Claim 7 wherein said coating includes from about 0.5 to about 5 parts by weight ink setting agent.

10. (Original) A recording medium as set forth in Claim 7 wherein said coating includes from about 0.25 to about 4 parts by weight insolubilizer and from about 0.5 to about 5 parts by weight ink setting agent.

11. (Original) A recording medium as set forth in Claim 7 wherein said coating includes up to about 50 parts by weight pigment.

12. (Original) A recording medium as set forth in Claim 1 wherein said coating is comprised of from about 75 to about 96 parts by weight polyvinyl alcohol and from about 2 to about 4 parts by weight boric acid.

13. (Original) A recording medium as set forth in Claim 12 wherein said coating includes from about 0.5 to about 1 part by weight insolubilizer.

Appl. No. 10/687,501
Amdt. dated October 7, 2005
Reply to Office Action of June 7, 2005

14. (Original) A recording medium as set forth in Claim 12 wherein said coating includes from about 1 to about 3 parts by weight ink setting agent.

15. (Original) A recording medium as set forth in Claim 12 wherein said coating includes from about 0.5 to about 1 part by weight insolubilizer and from about 1 to about 3 parts by weight ink setting agent.

16. (Original) A recording medium as set forth in Claim 12 wherein said coating includes up to about 10 parts by weight pigment.

17. (Original) A recording medium as set forth in Claim 1 wherein said base sheet has a basis weight as low as 28 pounds per 3,000 square feet.

18. (Original) A recording medium as set forth in Claim 1 wherein said base sheet has a basis weight of from about 28 pounds to about 270 pounds per 3,000 square feet.

Appl. No. 10/687,501
Amdt. dated October 7, 2005
Reply to Office Action of June 7, 2005

19. (Original) A recording medium as set forth in Claim 1 wherein said base sheet is a high gloss supercalendered paper having a basis weight in the order of about 80 to 270 pounds per 3,000 square feet.

20. (Original) A recording medium as set forth in Claim 1 wherein said base sheet is comprised of one or more of chemical, chemi-mechanical and mechanical pulps, size and one or more wet strength additives.

21. (Original) A recording medium as set forth in Claim 20 wherein said base sheet is manufactured from a furnish comprised by weight of about 50 parts hardwood chemical pulp, about 50 parts softwood chemical pulp, about 25 parts paper machine broke, from about 0.25 to about 2 percent rosin size and from about 0.25 to about 1.5% of one or more wet strength additives.

22. (Original) A recording medium as set forth in Claim 21 wherein the furnish includes in the order of about 0.25 percent by weight cationic agent.

Appl. No. 10/687,501
Amdt. dated October 7, 2005
Reply to Office Action of June 7, 2005

23. (Original) A recording medium as set forth in claim 21 wherein said base sheet has a basis weight of from about 28 to about 270 pounds per 3,000 square feet.

24. (Original) A recording medium as set forth in Claim 21 wherein said base sheet is sized with rosin or alkyl ketene dimer and a wet-strength additive and is dimensionally stable.

25. (Original) A recording medium as set forth in Claim 21 wherein said base sheet has a basis weight as low as 28 pounds per 3,000 square feet.

26. (Original) A recording medium as set forth in Claim 1 wherein said coating has a coat weight of from about 1.3 to about 2.7 pounds per 3, 000 square feet.

27. (Original) A recording medium as set forth in Claim 1 wherein said base sheet has a basis weight as low as 28 pounds per 3,000 square feet, and said coating has a coat weight of from about 1.3 to about 2.7 pounds per 3,000 square feet.

28-39. (Cancelled)

Appl. No. 10/687,501
Amdt. dated October 7, 2005
Reply to Office Action of June 7, 2005

40. (New) The recording medium as set forth in Claim 1 wherein said coating is free of pigments.

41. (New) The recording medium as set forth in Claim 40 wherein said coating includes an immobilizer.

42. (New) A recording medium as set forth in Claim 41 wherein said immobilizer is glyoxal, zirconium or epoxy based.

43. (New) A recording medium as set forth in Claim 40 wherein said coating includes an ink-setting agent.

44. (New) A recording medium as set forth in Claim 43 wherein said ink-setting agent comprises a cationic or conductive polymer.

Appl. No. 10/687,501
Amdt. dated October 7, 2005
Reply to Office Action of June 7, 2005

45. (New) A recording medium as set forth in Claim 40 wherein said coating is comprised of from about 75 to about 96 parts by weight polyvinyl alcohol and from about 1 to about 6 parts by weight boric acid.

46. (New) A recording medium as set forth in Claim 1 wherein said base sheet is a high gloss supercalendered paper having a basis weight in the order of about 80 to 270 pounds per 3,000 square feet.